NERRS Science Collaborative Progress Report
September 1, 2012 through February 28, 2013

Project Title: Restoring the Rookery Bay Estuary: Connecting People and Science for Long-Term Community Benefit (Formerly known as the Florida Freshwater Resource Project)

Principal Investigator: Victoria Vazquez, Ph.D.

Project start date: 11/01/2011

Report compiled by: Janel Vasallo, Project Coordinator

Contributing team members and their role in the project:

Victoria Vazquez, Ph.D.
Principal Investigator and Fiscal Agent

- Oversees project's budget.
- Reviews and approves all budget change requests submitted to the Science Collaborative office at the University of New Hampshire.
- Reviews and provides final approval on all applied science deliverables from hired engineering firm and technical consultant.
- Contributes to overall vision and direction of the project.

Tabitha Whalen Stadler
Collaboration Lead

- Reviews and provides final approval on all social science deliverables from contracted Nova Southeastern University team.
- Facilitates Project Advisory Group meetings and any other related project meetings involving stakeholders.
- Plans and coordinates all project related outreach efforts including outreach plan targeting area decision makers and stakeholders.
- Performs interviews of selected decision makers and stakeholders to provide informed guidance of the direction of later phases of anticipated social science research.
- Shared duties with Project Coordinator in the development of education materials used for outreach efforts, e.g., One Pagers.
- Contributes to overall vision and direction of the project.

Janel Vasallo
Project Coordinator

- Manages day to day operations of project.
- Updates and maintains project related portions of the rookerybay.org website.
- Coordinates project advisory group meetings (reservations, invitations, materials, etc.)

- Contact person and project liaison for project advisory group members.
- Liaisons with DEP procurement offices to manage project related contracts and deliverables.
- Writes and maintains all project related reports, including project's Bi-Annual Report.
- Liaisons with Science Collaborative Office at the University of New Hampshire.
- Maintains common drive folder of project materials.
- Coordinates all internal project meetings.
- Handles procurement of items for project.
- Serves as point of contact for project to contractors and public.
- Shared duties with Collaboration Lead in the development of education materials used for outreach efforts, e.g., One Pagers.
- Coordinates development of internship program.
- Maintains project calendar.
- Enters Project Advisory Group meeting data into applicable databases.
- Contributes to overall vision and direction of the project.

A. Progress overview:

Project Summary:

Rookery Bay National Estuarine Research Reserve (RBNERR) is surrounded by the growing population of Collier County, in southwest Florida. Of particular interest to the Reserve is the Rookery Bay Estuary, fed by Henderson Creek and several spreader canals in the northeast boundary of the reserve. The estuary is highly affected by altered freshwater inflows, which vary from nearly 134 million cubic feet per day in the wet season to zero during the dry season. To further complicate the coastal management situation, saltwater intrusion is a prevailing problem in South Florida with both private and local government wells becoming saltier over time. In response, local communities are requesting more water from the Henderson Creek watershed. Balancing the water needs of people with the needs of natural systems will be an ongoing issue for the community, which will intensify as the community grows and sea levels rise due to climate change. Keeping these challenges in mind, the project's goals have been refined during this reporting period as new information has become available and community input has been incorporated.

Newly Adopted Project Goals:

Restore and adaptively manage the quantity, timing and quality of the freshwater flowing into Henderson Creek and the Rookery Bay Estuary to ensure the health of the natural resources to meet long-term community needs. Successful completion of this project, and subsequent related efforts, will ensure important community needs such as:

- Ensuring continued sustainable availability of freshwater for the City of Marco Island,
- Ensuring recreational and commercial benefits to the community through protecting and enhancing habitat for fish, shellfish and myriad plants and wildlife,

- Coordinating stakeholder input on freshwater allocation by understanding and responding to community priorities related to the use, proximity to, and reliance upon the Rookery Bay Estuary, to create a long-term mechanism for community use
- Delivering on the Rookery Bay Reserve priority to serve as trustees for citizens of Florida and the Nation by conserving, researching and sharing these natural resources for future generations.

Progress Summary:

New information and stakeholder input has created some exciting developments within the project that have caused the project team to proactively adjust the goals and implementation strategies. Scientific data about freshwater inflow to the Rookery Bay Estuary has shifted the focus from Henderson Creek and caused a change in goals. Tremendous feedback from the stakeholder group, which the project's staff is working closely with, supported the changes and refined the implementation strategies to reach those goals. The project has been set on an exciting new course, including a more explanatory name. In place of the non-descript title of Florida Freshwater Resource project, the project has been rebranded as the Restoring the Rookery Bay Estuary: Connecting People and Science for Long-Term Community Benefit. This new name has already come in handy when sharing information about the project to new audiences and it more accurately describes the end goal and approaches.

Applied Science

As a result of lengthy and highly informative interviews to select and hire a qualified engineering firm, the project team learned that the majority of freshwater inflow into the Rookery Bay Estuary was coming from the northwest through canals and storm water runoff. This information seems to have been obtained by the applicants through running preliminary models in preparation for their interviews. The initial focus of the project was on the freshwater inflow through the bay's main tributary, Henderson Creek. The creek will continue to be a focal point, since information on historic flows and the freshwater needs of Marco Island are still of primary concern. However, this broadening of the issue has allowed the project team and stakeholders to look at the watershed considering the communities in that area and include these inflows more strongly in the future modeling efforts. Now that two engineering firms were chosen to conduct the bulk of the applied science research, modeling will begin in late March, including an historic assessment, calibration of the existing model, creating a local scale model and eventually the analysis of potential scenarios.

A large part of the applied science research will be the hydrological modeling of various scenarios based on existing, planned hydrological projects of Collier County and the Big Cypress Basin of the South Florida Water Management District. This was a direct result of stakeholder meetings, where projects were presented and stakeholders suggested that we get an analysis of what is already being considered so that these efforts can be prioritized

and vetted throughout the community. These provide an early and immediate opportunity for wise water decision-making which was a primary intended output of this project.

The selection process for contractors began in October of 2012 and concluded in January of 2013. Taylor Engineering, based out of Jacksonville, Florida and heavily experienced in coastal engineering projects will be serving as the project's lead engineering contractor. They will conduct the modeling and historic analysis. RWA Consulting, Inc. based out of Naples, Florida will serve as the project's technical consultant by bringing beneficial local knowledge of hydrological projects to the team to provide an added degree of expertise and quality control over the applied science outputs.

Throughout the reporting period the project team has participated in four meetings with the identified contractors to refine the scope and deliverables so that they can be contracted by FDEP. By the end of March, in the upcoming reporting period the contracts will be modified to include the tasks and deliverables agreed upon during the aforementioned meetings, allowing work by the contractors to begin immediately after.

The primary end-users or local decision makers for this project are the Big Cypress Basin of the South Florida Water Management District. They have been identified as a targeted audience and relationship building is in full swing. There have been three meetings with BCB engineers to ensure that our efforts are not doubled and the most effective objectives are identified for Taylor Engineering' s scope of work. Another significant achievement was the call from Ananta Nath, chief engineer at BCB to say that he was stopping the contract to conduct hydrologic modeling in the vicinity of the Rookery Bay Estuary. This demonstrates a formerly unseen level of consideration of Rookery Bay Reserve's priorities. Also it was specifically important so that this project and theirs did not duplicate efforts. We have since determined that their project will be a salinity model, while this one is focused on the freshwater inputs to the estuary. Due to the efforts of the project team, these two modeling efforts will now be coordinated and result in better science. This research then will be applied through this project to inform decision-making.

Social Science

During the reporting period the final contract between Nova Southeastern University (NSU) and the Florida Department of Environmental protection was signed, allowing for the social science research to begin. Social scientists at NSU are conducting a literature review of published peer-reviewed journal articles and other relevant reports, studies, and interviews, on attitudes towards water, water's role in everyday lives, and water-related decision-making. The literature will include analysis of scholarly and professional literature addressing relevant theories and best practices associated with water-related conflicts and community decision-making processes as well as documentation and analysis of any programs, projects, outputs or treatments that resulted from the reviewed research such as water campaigns and stakeholder groups. The literature review is anticipated to be completed by the summer of 2013 and is being led by Dr. Robin Cooper and her graduate assistant, Marci Dupraw.

The Collaboration Lead is also starting an outreach plan that is inclusive of the various audiences that relate to this project. Refocusing in this area has also occurred as a result of learning more about the issues and people involved. While the grant proposal clearly articulated the community-wide water users and the BCB, the project team has identified several other promising audiences.

The identification of one audience came about through an event in early October 2012, during which South Florida Water Management District (SFWMD) began emergency dredging to remove vegetation, with the assistance of large aquatic cranes and excavators, in the canal that feeds Henderson Creek to create better flow. This was necessary maintenance because the Henderson Creek watershed received six inches of rain and, even with canal gates completely open, the saturated ground and vegetation build up in the canal that feeds into the creek caused minor flooding in upstream communities. Since the creek runs right by Rookery Bay Reserve Headquarters and Environmental Learning Center, staff observed large amounts of organic matter dredged from the canal bottom flowing by the dock and bridge. After some calls and emails with the SFWMD, it was clear that the canal workers were unaware that the Rookery Bay Reserve was downstream or that we monitor and research water quality. Later we determined that great effort was made by the SFWMD to contain and remove the majority of dredged organic matter into piles on the banks of the canal for future removal. Despite these efforts, significant amounts of the vegetation got through the aquatic barricades that were set up. Since this incident, project staff members have personally met Chris Doherty who supervises canal maintenance and manual weir control. The project team plans to meet with them again to gain buy-in, identify if there are any training or information needs, and investigate the use of best practices that would minimize negative impacts to the Rookery Bay Estuary and nearby communities. SFWMD canal maintenance staff members are only one sub-set of audiences within the BCB. The project team is also planning to meet with the elected board and work with select appropriate staff such as those already mentioned in engineering, as they arise.

Another potential audience includes the people who live along a short span along the upper area of Henderson Creek outside of the Rookery Bay Reserve boundary, but just below the SFWMD weir. During an Advisory Group meeting, the team kayaked in this area and observed that these residences, which were mostly trailer homes, were not resilient to flooding and in a disaster could have a significant negative impact on the natural resources of the Reserve. In addition, the research mentioned that significant freshwater inflow entered from the northwest section of the Rookery Bay Estuary. This has led the project team to consider future efforts to include these upstream communities. Finally, a communication plan is also underway, which includes the creation and use of one pagers focused on important findings coming from both the applied and social science research. The communication plan focuses on the broader goals of gaining general support for the project and maintaining positive public relations, while the outreach plan is focused on specific knowledge gained and decision-making.

Other Developments

The project was fortunate enough to sponsor TIDES intern Emily Troisi from the University of New Hampshire, who joined the RBNERR team on July 1, 2012. She said goodbye in early December and returned to UNH for her final semester of graduate school. Emily was a great addition to the team and contributed to the collaboration work as well as to the daily operations of the project. She ended her internship by presenting on her experience and accomplishments while at Rookery Bay Reserve. She also shared more information about the TIDES program and the Science Collaborative program in a well-attended *Lunch and Learn* presentation. Thanks to the positive experience the project team and RBNERR staff had with Emily, we look forward to another opportunity to sponsor a TIDES intern in the coming reporting period.

Additionally, a stronger presence is being made for the project on the Reserve's website, specifically at http://www.rookerybay.org/learn/research/research-projects/restoring-the-rookery-bay-estuary-project, to allow information coming out of the project to be more accessible to the public.

During this reporting period the project team also undertook a major organizational endeavor by creating a highly detailed work plan for the project using a Gantt chart. This includes detailing the entire current and projected tasks through 2013. See attachment 1.

Team Meetings

The team meets monthly for one to two hours, at a minimum, and will continue to do so to ensure effective communication and the successful completion of project objectives. Team meetings during the current reporting period were held on:

- September 28, 2012
- October 19, 2012
- November 1, 2012
- December 11, 2012
- January 14, 2013
- January 28, 2013
- February 5, 2013
- February 20, 2013

B. Working with Intended Users:

Describe the progress on tasks related to the integration of intended users into the project for this reporting period.

Objectives related to the integration of intended users include increasing community-wide understanding of the value of water and the priorities of water users through social science research and communication strategies and creating a community mechanism to effectively collaborate and make decisions about the opportunities and issues related to water. The Project Advisory Group is currently our primary mechanism to include intended users with details listed below of the three meetings convened during this reporting period. The contract with NSU for a literature review has begun and it addresses water decision-making and the attitudes of community members. A detailed prospectus will be provided by NSU within one month.

Project Advisory Group

To effectively plan for and execute the grant-funded project within budget and on time, Rookery Bay Reserve has sought partners to serve on a Project Advisory Group (PAG) and participate in regular meetings. The group advises on the design and delivery of the overall project, including both ecosystem science and social science research, and in exchange participants learn about critical issues. This program includes learning experiences like field trips, meetings with neighboring governmental agencies, and presentations from experts in different fields. These learning experiences provide informed decision-making on behalf of the PAG members. All participants have professional experience in natural resources management and applicable knowledge of the community. The Project Advisory Group mechanism is fully in place and has made great gains in learning and providing feedback during this reporting period. A new and critical member has joined the PAG from Collier County and has already provided invaluable insights on related projects throughout the region.

September 14, 2012:

To create a stronger connection between the resource and the PAG members, the meeting's primary focus was to introduce the Rookery Bay Estuary to the participants and see what we could learn about the problem through first-hand experience. The day-long meeting included a kayak trip up Henderson Creek towards the weir that the SFWMD uses to control freshwater flow from the upstream canal. Since the creek is y-shaped, this also included a visit to the right fork which

Above: The PAG members viewing the Henderson Creek Weir from their kayaks.

includes a small basin with a spring that also contributes fresh water to Henderson Creek. At midday participants provided feedback on a stakeholder list that was guided in part by University of New Hampshire intern Emily Troisi. Input was also gained about potential topics to be researched, including an update on the engineer solicitation process required by our state agency.

Above: The PAG members are all smiles before embarking on their downstream boat tour of Henderson Creek, the resource at the heart of the project.

The day capped off with a powerboat ride down Henderson Creek and out to Rookery Bay, which was a new experience for five of the PAG members. This allowed them to visualize the tributary that provides Rookery Bay Estuary with the fresh water it needs and provided an opportunity to feel connected to the resource. A traditional meeting would not have been able to provide them with this connection to the resource. One hundred percent of the participants reported learning gains and a positive experience.

November 16, 2012:

Learning more about the freshwater needs of Marco Island was identified by the PAG members as the next meeting's focus. Marco Island is surrounded by the Rookery Bay Reserve and they use the surface waters of Henderson Creek as a freshwater source. Presentations and tours were led by the Marco Island Utilities and the group was able to meet directly with the director and assistant director. The project team and PAG members learned about consumptive water use patterns on Marco Island, including the upcoming needs and the current means of providing freshwater to the island's residents.

Above: PAG Members viewing the location where Marco Island Water and Sewer draws freshwater from the Henderson Creek Canal, a mile and half upstream from the Rookery Bay Reserve.

These on the ground experiences better prepared the PAG members to make recommendations about how to include the community members in the project and to identify what major issues need to be addressed to meet the project's goal of balancing the needs of the natural resource and the human population that depends on it. This meeting

was also significant because the project team was joined by Kalle Matso of UNH's Science Collaborative program.

Left: Team and PAG members learning about how freshwater is gravity fed from Henderson Creek into large lakes and then pumped below ground in *Aquifer Storage and Recovery* systems (ASR) from Marco Island Water and Sewer Director, Jeff Poteet.

February 1, 2013:

The PAG and project team were already aware of a planned project to divert water from a main canal in the region into Henderson Creek with the goal of lessening the amount of fresh water that flows into Naples Bay, which is north and west of the project area. The focus of this PAG meeting was to learn more about this project, including specifics related to the timing, impacts and approaches. Presentations from Big Cypress Basin engineers and Collier County Stormwater focused on a range of hydrological projects that increased the group's knowledge of upcoming diversion and rehydration projects planned for the watershed, including history, timeline, costs, water timing, quantity and quality. The meeting also provided a forum for technical questions and identified areas of overlap, inconsistency or collaboration. Speakers included the BCB Service Center engineers and Collier County storm water project manager and both spoke to the group directly about their intended plans. Representatives from Taylor Engineering and RWA participated in the meeting. Tasking Taylor Engineering and RWA Consulting to identify the most suitable projects to be run through the hydrological model was a significant outcome from this meeting.

Above: Image shared by the local water management district of the planned diversion project that could provide up to 50 cubic feet per second more of fresh water to the Rookery Bay Estuary. Taylor Engineering will be tasked to see what impacts this and other related projects may have on the estuary.

- **What did you learn? Have there been any unanticipated challenges or opportunities?**

  Through working with the intended users, Big Cypress Basin Service Center, helpful information has been shared between our project team and their engineers on the ground. We have become aware of the details of several projects they have slated in the area and in return BCB has learned more about the objectives of our projects and what they can do to assist in meeting the Restore the Rookery Bay Estuary project's goals.

- **Who has been involved?**

  The three project team members outlined in the introduction, the Project Advisory Group members listed below, Taylor Engineering, and RWA Consulting are now the core group of the project. An additional meeting between BCB and Rookery Bay was convened to discuss the project, the diversion that BCB is working on, and to get to know each other. The following people were in attendance:

  1) **Big Cypress Basin:** former Director, BCB staff member Lisa Kohler, who is a member of the PAG, Chief Engineer Ananta Nath, several other engineers, and Chris Doherty
  2) **Rookery Bay NERR:** the three Rookery Bay project team members, Rookery Bay Director Gary Lytton and Stewardship Coordinator Jeff Carter was convened on (add date).
  3) **Project Advisory Group:**

     - Michael Bauer, Ph.D., Natural Resources Manager, City of Naples
     - Robin Cooper, Ph.D., Assistant Professor of Conflict Resolution and Ethnic Studies, Nova Southeastern University
     - Brad Cornell, Policy Associate, Audubon Society of Florida
     - Lisa Koehler, Big Cypress Basin Administrator, South Florida Water Management District
     - Nancy Richie, Environmental Specialist, City of Marco Island
     - Emilio Robau, P.E., Civil Engineer
     - *New Addition:* Gerald Kurtz, P.E., Project Manager for Collier County Stormwater Management

- **Has interaction with intended users brought about any changes to your methods for integration of intended users, the intended users involved, or your project objectives?**

  Yes. Collaborating with the Big Cypress Basin Service Center and its engineers has allowed for a more knowledgeable approach in integrating the area's projects as scenarios into our own research and has led to partnering on similar scientific investigations to avoid the doubling of efforts and to increase cost efficiency. The team

anticipates even more changes, influenced by the resulting science, to occur as the project progresses.

- **How do you anticipate working with intended users in the next six months?**

  Within the next six months, NSU will have completed the literature review that will include information about successful applications of the social science conducted. Next steps will be determined based on the findings of this review. In addition, since the BCB is a specific audience for the project, the collaboration lead will be undergoing interviews and relationship building with them in preparation for presenting the projects outcomes when the time comes. Early research finding will also be available in the coming reporting period from the applied science research taking place. These results will not only be shared and commented on by the Project Advisory Group but will also serve the goals of community education through the project's communication plan.

C. Progress on project objectives for this reporting period:

- **Describe progress on tasks related to project objectives for this reporting period.**

  - Project goals were refined
  - All contractors for the project were selected, three in all
  - Multiple meetings with all three contractors to refine tasks for scope of work
  - Relationship building with the intended users of the project, the Big Cypress Basin Board and Service Center
  - Collaboration with community agencies, like Big Cypress Basin and Collier County Stormwater Management, to better align multiple projects
  - Outreach and Communication Plan
  - New audiences identified, like canal maintenance workers
  - Three project advisory group meetings held that provided valuable feedback and multiple opportunities to engage participants in new learning experiences related to project issues

  Progress made is further explained in Section A, Progress Overview.

- **What data did you collect?**

  The only data collected was post-meeting PAG surveys to assess knowledge gained.

- **Has your progress in this period brought about any changes to your methods, the integration of intended users, the intended users involved or the project objectives?**

  The goals of the project were refined during this period, which was brought about through learning more about the problems we were addressing and the input of the PAG. Additional audiences and intended users have been identified, including groups within the BCB (Board, canal maintenance staff, selected staff such as engineers), the communities on Henderson Creek and the communities along the northwestern edge of Rookery Bay Estuary. The integration of intended users is becoming more strategic,

through the plans to create outreach and communication plans. Another PAG member was recruited (Jerry Kurtz, Collier County) and there may be more effort to gain input from interested scientists. A simple form of integration was a recent meeting with BCB's Ananta Nath during which the project team, along with the RWA consultant, provided feedback on an upcoming modeling effort that could affect our project. In addition, we are receiving feedback from him on the scope of the engineering contract.

- **Have there been any unanticipated challenges, opportunities, or lessons learned?**

  The thorough interview process to select a qualified engineering contractor took place during this reporting period and, to the team's delight, the interviews yielded some great new information and generation of ideas. Some of the examples of what the team learned include:

  - Preliminary model runs showed that approximately 17% of fresh water flows into Rockery Bay Estuary enter through Henderson Creek and that approximately 40% of freshwater flows northwest of there
  - Should run preliminary models to help identify sampling sites and priorities
  - That means these communities to the west of Henderson Creek have stormwater systems feeding the Rookery Bay Estuary
  - These flows and potentially pollutants will need to be studied
  - There may be proprietary issues with some models
  - Use three models to include surface, groundwater and saltwater
  - There are variations in how these models integrate – some firms had advanced integration capabilities to explore
  - Some firms had automated methods for models to integrate which seemed to take more time and money to create, yet then allowed for the ability to run more scenarios overall
  - If the model was automated in this way, could maybe stay with RB or others and be used repeatedly without additional costs
  - There may have been a firm that could also automate the integration of the biological data?
  - Include proposed land use changes into models
  - (not-verified) Henderson Creek canal is deep enough to go into first layer of aquifer, therefore would be affecting groundwater over a larger area like in the Picayune site
  - Saw great animations to depict salinity changes with tide/season/etc. that could be used to tell the story by us and educators.
  - This would also be great for RB to show difference among the bays we study in the Ten T's.
  - Interest raised in economic valuation as part of this project. Probably costly, but references includes some approaches such ahs "Net Environmental Benefit Analysis" and "Net Ecosystem Analysis"
  - The Engineering firm will look at historical data such as aerial images, surveys, paleo-invertebrates, dead oyster reefs, etc.

- Also may have opportunity to choose and research indicator species and habitat changes – this is a chance to think about what would serve as all the best in making these choices
- Several mentioned helping us get additional money to do future projects to continue what we are doing
- Several mentioned RB impairment issue, and I don't know the details of that
- We conceived of a process of good QAQC since engineering and modeling are out of our realm and heard about stuff like "Dr. Checks" and third party reviews, TAC's, etc.
- Not a single firm had experts in outreach or stakeholder input, was all on-the-job training

This process was also cumbersome since it required two 10 hour work days and many hours of interviewing, scoring and compiling the information to conform with FDEP requirements. The project team also received phone calls from the contractors who were not chosen to provide a debrief, which was uncomfortable to deal with and added to the burden that this process required.

- **What are your plans for meeting project objectives for the next six months?**

We will continue to move forward as planned with the projected quarterly objectives in the project timeline and attached Gantt chart. In the next six months both social and hydrological research will be well underway, which will provide the foundational information needed to meet the project's final goals of proposing recommendations that will help determine the amount of fresh water needed to restore the Rookery Bay Estuary to as near a historic condition as possible. The social science research will help address the people and organizations that need to be targeted in outreach efforts and the methods we need to employ to increase community-wide understanding of the value of water and its use. The coming six months will lay the necessary foundation to move forward in addressing the project's goals and are anticipated to be rather eventful.

The work plan, Attachment 1, provides a fairly comprehensive idea of the team's plans in the next reporting period.

Benefit to NERRS and NOAA:

A formal literature review on the attitudes, beliefs and behaviors related to water use, the case study research about freshwater inflow problems and the stakeholder analysis that are being conducted as part of this project can inform other NERR managers and staff when making management decisions. The team will make this available when completed in whatever way will help the system.

D. Describe any activities, products, accomplishments, or obstacles not addressed in other sections of this report that you feel are important for the Science Collaborative to know.

The Collaboration Lead on this project, Tabitha Stadler, will be leaving her full-time position with Rookery Bay as the Coastal Training Program Coordinator on March 31, 2013, but will be working in the same capacity on this grant as a part-time OPS staff member. In addition, she was the supervisor for Project Coordinator Janel Vasallo, who will now be supervised by the Principal Investigator Victoria Vazquez. This will not substantially affect the project.

The project coordinator position for this project was originally envisioned to be a part time role, with 25 work hours weekly, but due to the project growing rapidly and creating an opportunity for more work to be accomplished to serve not only the goals of the project but also the Rookery Bay Research Reserve, the project coordinator role has been expanded to be a full-time position.

Department/ Title	Research / Restoring the Rookery Bay Estuary: Connecting People and Science for Long-Term Community Benefit.	This work plan is a living document and will be updated regularly as contracts are finalized and specific deliverables and due dates are identified, the research findings lead to a changes in the project's direction, and so forth.
Prepared by	Janel Vasallo	
Date - last updated	Thursday, February 07, 2013	2013
Management Plan Goals Met:	Ensure user experiences are sustainable and consistent with natural and cultural resource protection for the benefit of existing and future generations. Minimize adverse environmental impacts from land use while restoring the ecosystem services. To increase the community's level of awareness, knowledge, skills and sense of value for the coastal environment that would result in positive attitudinal and behavioral change.	

				January				February				March				April				May				June				July				August				September				October				November				December				
Objective	**Task**	**Responsible**	**Priority**	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	**Comments**
Objective 1	Applied Science																																																			
1	Determine scope of work, tasks and deliverables for contracting purposes with Taylor Engineering	VV																																																		
2	Submit scope of work , tasks and deliverables and ensure timely execution of final contract, in cooperation w/ DEP procurement, for Taylor Engineering.	JV																																																		Contingent on outside forces like the contract execution date by DEP procurement. Contact Ruth Heggen.
3	Determine scope of work, tasks and deliverables for contracting purposes with RWA, Inc.	VV																																																		
4	Submit scope of work , tasks and deliverables and ensure timely execution of final contract, in cooperation w/ DEP procurement, for RWA, Inc.	JV																																																		Contingent on outside forces like the contract execution date by DEP procurement. Contact Ruth Heggen.
5	Restructure cumulative budget for project to reflect changes in staffing and reduced roles of contractors.	VV																																																		
6	Meet with BCB principal engineer Ananta Nanth, to discuss the opportunities for collaboration, avoid duplication and planning in projects related to Henderson Creek after applied science tasks and deliverables are complete.	VV TS JV ER																																																		
7	Create content and plan for meetings with project advisory group members and partnering scientist and engineers to review and provide feedback to Taylor Engineering's data collection and monitoring plan before initiating it.	VV																																																		
8	Gather input from project advisory group members and partnering scientist and engineers to review and provide feedback to data collection and monitoring plan before initiating it. Method of gathering is TBD, is contingent on needs.	JV																																																		
9	Present RBNERR Research department's findings of salinity levels in the shared estuary. Will serve to better inform project team, partnering agencies, and contractors.	VV																																																		
10	Share valuable research findings from project with RBNERR staff when it seems applicable or useful. As meeting, webinar, etc.	VV																																																		
Objective 2	Social Science and Communications																																																			

Date - last updated	Thursday, February 07, 2013
Management Plan Goals Met:	Ensure user experiences are sustainable and consistent with natural and cultural resource protection for the benefit of existing and future generations. Minimize adverse environmental impacts from land use while restoring the ecosystem services. To increase the community's level of awareness, knowledge, skills and sense of value for the coastal environment that would result in positive attitudinal and behavioral change.

2013

Objective	Task	Responsible	Priority	January				February				March				April				May				June				July				August				September				October				November				December				Comments
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
1	Initial meeting to determine scope of work, tasks and deliverables for contracting purposes with Nova Southeastern University.	TS																																																		
2	Submit scope of work , tasks and deliverables and ensure timely execution of final contract, in cooperation w/ DEP procurement, for Nova Southeastern University.	JV																																																		Contingent on outside forces like the contract execution date by DEP procurement. Contact Ruth Heggen.
3	Read studies identified by NSU during research process	TS																																																		
4	Further research projects identified by NSU research and contact appropriate people related to those projects as the need arises.	TS																																																		
5	Create outreach plan for approaches that will be taken to engage area stakeholders and decision makers. This will be a living document that will be updated quarterly.	TS																																																		
6	Create communication plan for approaches that will be taken to educate partners, partnering agencies and other audiences when identified. This will be a living document that will be updated quarterly.	TS																																																		
7	Author and distribute one-pagers consisting of original content on subjects related to project goals through appropriate outlets.	TS and JV																																																		
8	Monthly one-pagers expressly dedicated to reporting new developments, outcomes and news related to the project for the most recent month.	JV and TS																																																		
9	Address issues with additional audiences as the communication plan evolves and those groups are identified through the use of educational materials and general engagement activates, like public meetings and presentations, on findings from the project's research as they emerge.	TS																																																		
10	Organize and plan for on site meeting, tour, and educational intervention with Big Cypress Basin's Superintendent and Canal Maintenance Team- includes performing needs assessment.	TS																																																		
11	Host tour and educational intervention (if deemed necessary) with Big Cypress Basins Superintendent and Canal Maintenance Team	TS																																																		
12	"Getting to know you" meeting with selected contractors and select RBNERR staff.	JV																																																		Necessary to ensure the selected contractors understand our mission, goals and culture. This will also serve the purpose of benefiting the reserve my providing opportunities for RBNERR staff to better guide the work of the contractors(i.e. selecting the best indicator species) so that the project executed in the most efficient way possible.

Date - last updated	Thursday, February 07, 2013
Management Plan Goals Met:	Ensure user experiences are sustainable and consistent with natural and cultural resource protection for the benefit of existing and future generations. Minimize adverse environmental impacts from land use while restoring the ecosystem services. To increase the community's level of awareness, knowledge, skills and sense of value for the coastal environment that would result in positive attitudinal and behavioral change.

2013

Objective	Task	Responsible	Priority	January				February				March				April				May				June				July				August				September				October				November				December				Comments
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
13	Facilitate the Project Advisory Group Meetings.	TS																																																		
14	Perform overhaul and restructuring, including addition of new project information and materials, of project's rookerybay.org web pages.	JV																																																		
15	Perform regular maintenance of project's rookery bay.org web pages.	JV																																																		Will be ongoing activity / process.
16	Meeting with RBNERR Communications Coordinator to exchange project updates and developments. To result in advertisement of project through appropriate and official outlets.	TS JV RW																																																		
17	In person introductory meeting and presentation between project staff and representatives from DEP departments, including but not limited to, DEER, Procurement, CAMA, etc. with the goal of better informing Tallahassee colleagues of the projects importance and to expand existing relationships.	VV JV												Planning	Planning																																					
18	Quarterly meetings with DEP's DEER offices.	VV TS JV																																																		
Objective 3	Operations																																																			
1	Monthly meeting with Environmental Manager to update on progress of project, updates on research findings, to share challenges and triumphs and any other relevant information.	JV AC VV TS																																																		
2	Organize Project Advisory Group Meetings, including coordinating with PAG members, inviting guests, speakers and preparing necessary meeting materials.	JV																																																		
3	Arranging meeting space, food, set up and clean up for PAG meetings. (Note: This is only until a Meeting Support Services Contractor is hired to assume this task)	JV																																																		
4	Solicit 3 quotes, including one from a minority, for Meeting Support Services Purchase Order	JV																																																		
5	Initiate and pay out Meeting Support Services Purchase Order	JV																																																		
6	Manage incoming deliverables and ensure their timely review and pay. For all contracts.	JV																																																		
7	Write bi-annual report and submit to UNH Science Collaborative office.	JV																																																		
8	Plan and organize all internal project meetings.	JV																																																		
9	Plan and organize all meetings between project team and contractors.	JV																																																		
10	Procure any services or items needed for the project.	JV																																																		
11	Serve as point of contact for DEP Procurement.	JV																																																		

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Objective	Task	Responsible	Priority	Comments
12	Liaison with the University of New Hampshire (UNH) Science Collaborative office.	JV		
13	Serve as point of contact for contractors and public. Respond to any request for information.	JV		
14	Process and enter Project Advisory Group meeting and any other related meeting's data into NOAA ERD Database.	JV		
15	Process and enter all meeting data into RB/CAMA/DEP reports quarterly.	JV		
16	Maintain project calendar of events, incorporate all contractor due dates and take into account reserve wide events.	JV		
17	Organize and maintain project's common drive folder on RBNERR server and make additions and changes as needed.	JV		
18	Keep all documents and records related to project in organized manner and easily accessible to team, contractors or any interested individual.	JV		
19	File end of year budget report with UNH .	JV		No-cost project extension will need to be filed in following work year.
20	Submit budget change request to UNH Science Collaborative office as the need arises/changes occur.	JV		
21	Maintain communication log for project.	JV		
22	Oversee Intern, if and when available. Provide with all necessary guidance and incorporate into project and reserve wide opportunities.	JV		Team has laid years of ground work for the opportunity to host a TIDES intern. Decision at this point is up to UNH Science Collaborative Office.
23	Draft, review, and finalize addendum for Taylor Engineering's contract as new tasks arrise.	JV		
24	Draft, review, and finalize addendum for RWA, Inc as new tasks arrise.	JV		
25	Draft, review, and finalize addendums for NSU social science research contract as tasks arrise.	JV		
26	GANTT Chart Development and Maintenance.	JV Input from: VV TS		

Total Tasks:	54

Responsibility Key:

VV =	Victoria Vazquez
TS =	Tabitha Stadler Whalen
JV =	Janel Vasallo
AC =	Alberto Chavez
RW =	Renée Wilson

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Objective	**Task**	**Responsible**	**Priority**	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	**Comments**

ER =	Emilio Robau
=	Multiple Responsible